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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,261	04/20/2004	Riccardo Lonati	38921/GM/pal	2400

7590 05/16/2007  
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Via Meravigli, 16  
20123 MILANO,  
ITALY

EXAMINER
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DONDERO, WILLIAM E

ART UNIT	PAPER NUMBER
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3654

MAIL DATE	DELIVERY MODE
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05/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/827,261

Applicant(s)

LONATI, RICCARDO

Examiner

William E. Dondero

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 18, 2007 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmodde et al. (US-6079656) in view of Kamen (NPL). Regarding Claims 1-3, Schmodde et al. disclose a device for adjusting the gram force applied to a thread 2 in knitting machines 4, comprising a control unit 24 that is adapted to drive power supply means of a motor 9 for unwinding a thread to be fed to the knitting machine, gram force sensing means 22 adapted to detect the gram force applied to the thread and to emit a gram force signal, wherein the control unit comprises means (dash/dot line from 25 to 9) adapted to emit a signal for driving the power supply means of the motor (Figures 1-2). Further regarding Claim 2, Schmodde et al. disclose the control unit comprises a PID

controller which is adapted to receive in input signals (Column 4, Lines 57-67).

However, Schmodde et al. are silent about comparator means adapted to compare the gram force signal with a reference signal in order to obtain a gram force error signal and the control unit adapted to drive the supply means of the power supply means of the motor according only to the gram force error signal of the thread and to a signal that is the derivative with respect to time of the gram force signal emitted by the gram force sensor means. However, Kamen discloses a conventional PID type controller that receives an input signal  $r(t)$  into a comparator means adapted to compare the input signal with a reference signal in order to obtain a error signal  $e(t)$  and the control unit adapted to drive the power supply means of a motor according only to a pair of signals, that is the error signal  $e(t)$  and a signal  $\Theta'(t)$  that is the derivative, including the sign, with respect to time of the input signal  $\Theta(t)$  emitted by a sensor means (Pages 59-66, Figure 4.6). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the controller of Schmodde et al. with the conventional PID controller of Kamen to produce accurate stable control without a steady-state error or process oscillation. Regarding Claim 4, Schmodde et al. disclose the controller is adapted to drive the motor power supply means so as to supply the motor in order to maintain a constant value of the gram force applied to the thread (Figure 3 and Column 4, Lines 57-67).

With respect to Claims 5-7, the method described in this claim would inherently result from the use of the gram force adjustment device of Schmodde et al. in view of Kamen as advanced above.

### ***Response to Arguments***

With respect to Applicant's arguments starting on page 6, line 11 to page 8, line 5, Applicant argues Kamen discloses comparing the derivative of the controlled signal  $\Theta'(t)$  with the derivative of the reference signal  $r'(t)$  to perform the control operation rather than, as claimed in the instant application, comparing the error signal with the derivative of the measured signal to perform the control operation. Applicant's arguments have been fully considered but they are not persuasive. As shown in Figure 4.6 of Kamen and advanced above, Kamen discloses comparing the error signal  $e(t)$  with the derivative with respect to time of the measured signal  $\Theta'(t)$ .

### ***Conclusion***

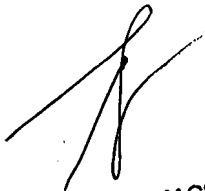
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William E. Dondero whose telephone number is 571-272-5590. The examiner can normally be reached on Monday through Friday 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on 571-272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wed



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